



Amberlite XAD-1180N 非离子型多孔树脂

Key Features

Hydrophobic, polymer.

Macroporous structure with a high surface area.

Excellent physical, chemical, and thermal stability through repeated cycles, in either column or batch modes.

Typical Properties

Physical Properties	
Copolymer	Crosslinked DVB
Matrix	Macroporous
Type	Adsorbent
Physical Form	White, opaque, spherical beads
Nitrogen BET	
Surface Area	600 m ² /g
Average Pore Diameter	400 Å
Total Pore Volume	1.5 cc/g
Chemical Properties	
Ionic Form as Shipped	Not applicable
Total Exchange Capacity	Not applicable
Water Retention Capacity	61 – 67%
Particle Size §	
Particle Diameter	350 – 600 µm
< 250 µm	≤ 5.0%
> 850 µm	≤ 10.0%
Swelling (in solvent)	
Methanol	10%
2-Propanol	15%
Acetone	10%
p-Xylene (via methanol)	10%



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Density	
Particle Density	1.015 – 1.025 g/mL
Shipping Weight	~660 g/L

Key Applications

Recovery and purification of antibiotics, water-soluble steroids, enzymes and proteins

Recovery of plant extracts

Enzyme immobilization

Separation of non-polar organic solutes from polar solvents

Suggested Operating Conditions

Maximum Operating Temperature	150°C (302°F)
pH Range (Stable)	1 – 14
Bed Depth, min.	
Capture	750 mm (2.5 ft)
Chromatography	1500 mm (4.9 ft)
Flowrates	
Loading	2 – 16 BV*/h (usually)
Elution/Desorption	1 – 4 BV/h
Regeneration	1 – 4 BV/h
Rinse	1 – 8 BV/h
Regenerants or Eluting Agents	Water-miscible organic solvents (methanol, ethanol, isopropanol, acetone, etc.) for hydrophobic compounds Pure solvents for regenerating resin fouled by oils and antifoams Dilute bases (0.1 – 0.5% NaOH) for weakly acidic compounds Strong bases (2 – 4% NaOH) for regenerating resins fouled with proteins, peptides Dilute acids (0.1 – 0.5% HCl) for weakly basic compounds Dilute oxidizing agents (< 0.5%) such as peroxide to enhance



	the removal of protein fouling Buffer elution for pH-sensitive compounds Water when adsorption is from an ionic solution Hot nitrogen or steam for volatile materials
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General Information

Pretreatment

Amberlite XAD-1180N Polymeric Adsorbent is shipped as a water-wet product imbibed with sodium chloride (NaCl) and sodium carbonate (Na₂CO₃) salts to inhibit bacterial growth. These salts must be washed from the adsorbent prior to use and it is suggested that this be achieved by washing with water at a linear flowrate of 5 – 10 m/h until the required level is achieved. In some sensitive applications, residual monomeric or oligomeric compounds may be required to be removed from the adsorbent. A regeneration with the proposed regenerant is also recommended prior to beginning the first service cycle. If the regenerant is an alcohol, it must be displaced with water prior to beginning the first loading cycle.

Important Information

Polymeric adsorbents, as produced, contain by-products resulting from the manufacturing process. The user must determine the extent to which organic by-product must be removed for any particular use and establish techniques to assure that the appropriate level of purity is achieved for that use.

Like any chromatographic stationary phase, a conditioning step with the working solvent must be performed before operation.

WARNING: Oxidizing agents such as nitric acid attack organic ion exchange resins under certain conditions. This could lead to anything from slight resin degradation to a violent exothermic reaction (explosion). Before using strong oxidizing agents, consult sources knowledgeable in handling such materials.